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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,717	03/15/2004	Minoru Takaya	250367US2	9984
22850	7590	01/23/2006	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.			MAI, ANH T	
1940 DUKE STREET			ART UNIT	
ALEXANDRIA, VA 22314			PAPER NUMBER	
			2832	

DATE MAILED: 01/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/799,717

Applicant(s)

TAKAYA ET AL.

Examiner

Anh T. Mai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 December 2005.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-35 is/are pending in the application.  
4a) Of the above claim(s) 1-14, 17, 18, 22-24 and 26 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 15, 16, 19-21, 25 and 27-35 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4pgs.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Election/Restrictions*

Applicant's election with traverse of claims 15-16, 19-21, 25, 27-29 and 30-35 in the reply filed on December 8, 2005 is acknowledged. The traversal is on the ground(s) that the search and examination of the entire application would not place serious burden on the examiner. This is not found persuasive because the non-elected claims drawn to different species requiring searching in an art different from that of the elected claims.

The requirement is still deemed proper and is therefore made FINAL.

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 15-16, 19/15, 19/16, 20, 21, 25/20, 27/20, 29/20, 25/21, 27/21, 29/21, 33, 35 are rejected under 35 U.S.C. 103(a) as being unpatentable Takaya [6713162] in view of Kanetaka et al. [6864774].

Takaya discloses a core board 10b, plurality of band-shape conductors 13 formed on front and rear surfaces of the board [figures 3-4]; insulating layers 10a, 10c covering the conductor patterns and bridging conductor patterns 12 formed on cut surface of the board sliced transversely with respect to band-shape conductor patterns so that exposed end portions

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of band-shaped conductor patterns on each of said cut surfaces of said board to connect to one another by bridging conductor patterns to provide helical coil. Figures 11-13 show a plurality of laminated core boards.

Takaya discloses the invention as claimed as cited above except for the board being made of inorganic sintered.

Kanetaka discloses substrate 21 is made of sintered ferrite [inorganic sintered] as disclosed in col 3, lines 9-12. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use inorganic sintered board as taught by Kanetaka for the circuit board as disclosed by Takaya. The motivation would have been to provide alternate materials that are available to perform the mechanical/ electrical requirement for the device. Therefore, it would have been obvious to combine Kanetaka with Takaya.

**In this embodiment, the substrate 21 and magnetic material portion 31 are sintered magnetic material made of sintered ferrite formed by sintering Ni—Zn ferrite material, and conductor layer 24 is a 10 to 30  $\mu$ m thick conductor formed by an electrolytic plating of Ag or Ag—Pd.**

With respect to claims 19/15, 19/16, Takaya discloses the band-shaped conductor smooth [figures 1-2].

With respect to claims 20-21, 35, the claims are rejected for reciting method/step derived from the structure of claim 15 which is rejected above [figures 11-13].

With respect to claim 29/20, 29/21, ferrite is magnetic substance.

3. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takaya in view of Agrawal et al. [20030227664].

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Tayaka discloses the claimed as cited below except for the organic core board having filler. Agrawal discloses substrate of polyimide incorporated with fillers [paragraph 0156]. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use core board of organic with filler as taught by Agrawal for the inductor as disclosed by Tayaka. The motivation would have been to provide alternative materials that are available to perform the mechanical/electrical requirement for the device.

4. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takaya in view of Fujimoto et al. [5116663].

Tayaka discloses the claimed as cited below except for the organic core board being porous ceramic. Fujimoto discloses substrate porous ceramic substance which has a specific dielectric constant of 4.5 [col 4, lines 19-24]. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use core board of ceramic porous as taught by Fujimoto for the inductor as disclosed by Tayaka. The motivation would have been to provide alternative materials that are available to perform the mechanical/electrical requirement for the device.

#### *Claim Rejections - 35 USC § 102*

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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6. Claims 30- 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Takaya [2002/0009577].

Takaya discloses a core board 10b, plurality of band-shaped conductor patterns 13 formed on top and bottom [front/rear] surfaces of the board; bridging conductor patterns 14 formed on cut surface of the board sliced transversely with respect to band-shaped conductor patterns so that exposed the end portions of said band-shaped conductor patterns on each of said cut surface of said board are connected to one another by bridging conductor patterns thereby provide a helical coil [figures 3-4].

With respect to claim 32, plurality of core boards 140a-c, conductive layer 143a is formed on one surface of core board and plurality of core boards are laminated through insulating layer 140b as shown in figures 34-36.

#### *Conclusion*

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO/892 form.

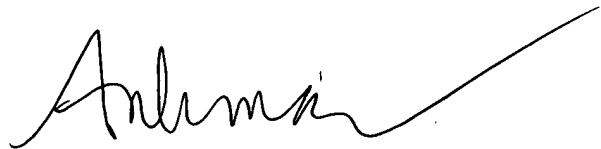
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh T. Mai whose telephone number is 571-272-1995. The examiner can normally be reached on 5/4/9 Schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on 571-272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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011806

A handwritten signature in black ink, appearing to read 'Anh Mai', with a long, sweeping horizontal stroke extending to the right.

**ANH MAI  
PRIMARY EXAMINER**